

Brown County

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

6/22/2017

Using the most recent IMPLAN data available (2015) adjusted for 2017, 22 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Brown County economy.¹

These 22 sectors have a total direct output of approximately **\$567.2 million** and support **1,030.6 jobs** in Brown County. Running the model for all 22 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Brown County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	1,030.6	14.03%	\$100,429,835	20.17%	\$567,171,265	113.90%
Indirect Effect	478.2	6.51%	\$32,939,375	6.61%	\$71,658,276	14.39%
Induced Effect	273.5	3.72%	\$18,363,963	3.69%	\$34,369,164	6.90%
Total Effect	1,782.3	24.27%	\$151,733,173	30.47%	\$673,198,705	135.19%

As shown in the above table, agriculture, food, and food processing sectors support **1,782.3 jobs**, or **24.27%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$673.2 million, roughly 135.19% of the economy.**

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 17 agriculture, food, and food processing sectors is approximately **\$151.7 million**, or **30.4% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **30.4% of the total economy.**

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

1 Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

2 Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

3 Value added = labor income + indirect business taxes + other property type income.

4 GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

5 Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the dog and cat food manufacturing sector is the top employer with **217.6 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Brown County.

Top Ten Agriculture, Food, and Food Processing Sectors by Employment		
Sector	Total Employment	Total Output
Dog and cat food manufacturing	217.6	\$296,344,547
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	195.9	\$24,231,061
Grain farming	173.5	\$63,057,790
Food product machinery manufacturing	111.9	\$35,243,920
Wholesale trade	90.7	\$20,898,266
Landscape and horticultural services	86.9	\$3,293,360
Farm machinery and equipment manufacturing	79.1	\$43,064,300
Other local government enterprises	62.0	\$14,781,595
Oilseed farming	50.6	\$57,480,847
Truck transportation	46.6	\$6,413,653

The dog and cat manufacturing sector directly contributes approximately **\$296.3 million** to the Brown County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Agriculture, Food, and Food Processing Sectors by Output		
Sector	Total Employment	Total Output
Dog and cat food manufacturing	217.6	\$296,344,547
Grain farming	173.5	\$63,057,790
Oilseed farming	50.6	\$57,480,847
Farm machinery and equipment manufacturing	79.1	\$43,064,300
Food product machinery manufacturing	111.9	\$35,243,920
Other animal food manufacturing	25.6	\$34,999,764
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	195.9	\$24,231,061
Wholesale trade	90.7	\$20,898,266
Other local government enterprises	62.0	\$14,781,595
Owner-occupied dwellings	0.0	\$6,531,878

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Brown County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	50.6	\$57,480,846.41
Grain farming	173.5	\$63,057,788.85
Vegetable and melon farming	0.2	\$30,594.15
Fruit farming	1.1	\$68,871.07
Tree nut farming	0.0	\$30.93
Greenhouse, nursery, and floriculture production	8.8	\$843,284.67
All other crop farming	43.1	\$3,247,818.23
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	195.9	\$24,231,060.03
Dairy cattle and milk production	5.3	\$1,399,790.64
Poultry and egg production	1.3	\$787,555.75
Animal production, except cattle and poultry and eggs	8.6	\$1,036,445.86
Commercial logging	6.0	\$231,609.30
Dog and cat food manufacturing	217.6	\$296,344,543.46
Other animal food manufacturing	25.6	\$34,999,763.49
Bread and bakery product, except frozen, manufacturing	6.6	\$793,821.04
Frozen cakes and other pastries manufacturing	0.4	\$62,021.90
Wineries	0.6	\$128,905.88
Sawmills	1.1	\$262,281.42
Farm machinery and equipment manufacturing	79.1	\$43,064,300.54
Food product machinery manufacturing	111.9	\$35,243,919.37
Veterinary services	6.4	\$562,645.08
Landscape and horticultural services	86.9	\$3,293,359.76

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Brown County, the retail sector was omitted.